

* NOTICES *

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CLAIMS

[Claim(s)]

[Claim 1] The case for ignitors which it comes to combine free [exchange of the box-like main part case which contains a printed circuit board, and the transformer case which contains a pressure-up transformer and is connected with the rear of the aforementioned main part case].

[Claim 2] The case for ignitors according to claim 1 characterized by filling up the aforementioned transformer case with a bulking agent.

[Claim 3] The case for ignitors according to claim 2 characterized by connecting the aforementioned transformer case with the aforementioned main part case, and filling it up with a bulking agent.

[Claim 4] The case for ignitors according to claim 3 characterized by preparing a bridge wall lower than other side walls in the rear of the aforementioned main part case.

[Claim 5] The claim 1 characterized by forming an attachment foot in the aforementioned main part case or a claim 4 is a case for the ignitors of a publication either.

[Claim 6] At least one side of the aforementioned attachment foot is a case for ignitors according to claim 5 characterized by the ability to attach grounding metallic ornaments.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the case for the ignitors for containing the ignitor which lights a gas combustor implement and a petroleum combustor implement by the spark.

[0002]

[Description of the Prior Art] The ignitor of the electric type which lights a gas combustor implement and a petroleum combustor implement using a spark is used abundantly.

[0003] This thing energizes to an upstream the oscillating current from the printed circuit board which generates the oscillating current of large energy with a free-running-multivibrator method etc., and a printed circuit board, and comes to combine the pressure-up transformer which outputs several 10kV high voltage to secondary. In addition, the high voltage generated by the pressure-up transformer is led to the needle electrode arranged near the combustion section through output lead wire, and generates the spark for ignition.

[0004] As for the conventional ignitor, it is common to contain a printed circuit board and a

pressure-up transformer in the case of one, and to fill up with and constitute bulking agents, such as an epoxy resin, inside. A bulking agent is because an energized part can be closed and the insulation deterioration by dust or moisture can be prevented effectively.

[0005]

[Problem(s) to be Solved by the Invention] it is based on this conventional technology -- solving -- since the both sides of a printed circuit board and a pressure-up transformer were contained in a single case, when a case became large-sized and the fill of a bulking agent increased unfairly, there was a problem that it was difficult to make it correspond accurately to much option specifications. That is, an ignitor can realize these options by combining a predetermined pressure-up transformer to a common printed circuit board, although various option specifications are required with the mechanical specification of the pole of output lead wire, a position, etc. other than electric specifications, such as a voltage value of a high-voltage output, and the amount of energy. However, when a printed circuit board and a pressure-up transformer are contained in the case of one, the case at that time is because it is made to differ for every option specification or cannot but consider as the big thing common to all options.

[0006] Moreover, it faced being filled up with a bulking agent, the setting time became long, and the case in this way where volume is big also had the problem of being very hard to deal with it.

[0007] Then, the purpose of this invention also has handling in offering the very easy case for ignitors, when it can respond easily to various option specifications by using as another object the main part case which contains a printed circuit board, and the transformer case which contains a pressure-up transformer, and combining both.

[0008]

[Means for Solving the Problem] The composition of this invention for attaining this purpose makes it the summary to combine free [exchange of the box-like main part case which contains a printed circuit board, and the transformer case which contains a pressure-up transformer and is connected with the posterior part of a main part case].

[0009] In addition, a transformer case can be filled up with a bulking agent.

[0010] Moreover, a transformer case can be connected with a main part case, and it can be filled up with a bulking agent, and other side corkscrew twist low bridge walls can be prepared in the posterior part of a main part case.

[0011] On the other hand, an attachment foot may be formed in a main part case, and at least one side of an attachment foot is good for it also as attachment of grounding metallic ornaments being possible.

[0012]

[Function] When based on the composition of this invention, since what suits the pressure-up transformer contained inside can be chosen and it can combine with a main part case, as for a transformer case, it is possible to make it correspond simply to arbitrary option specifications as a whole.

[0013] When a bulking agent can realize easily insulation performance required of a pressure-up transformer when filling up a transformer case with a bulking agent, and filling up a main part case with a bulking agent, a bulking agent can intercept a printed circuit board from the open air, and can prevent the performance degradation by adhesion of dust etc. effectively.

[0014] When preparing a low bridge wall in the posterior part of a main part case, after

connecting a transformer case, it is possible by filling up a main part case with a bulking agent to be able to make the bulking agent with which it overflowed from the main part case exceeding the bridge wall flow into a transformer case smoothly, and to raise the integrity of a main part case and a transformer case further. In addition, an epoxy resin, a urethane resin, etc. can be used for the bulking agent with which a main part case and a transformer case are filled up.

[0015] If an attachment foot is formed in a main part case, the whole can be fixed to arbitrary attach points using an attachment foot, and the whole electric grounding can be easily taken by attaching grounding metallic ornaments in an attachment foot.

[0016]

[Example] Hereafter, a ***** example is explained for a drawing.

[0017] The case for ignitors comes to combine the main part case 10 and the transformer case 20 (drawing 1).

[0018] The main part case 10 is the box-like container object of the owner bottom which contains printed circuit board P (drawing 1 , drawing 2), and is really fabricated by suitable insulating rigid-plastic material. The main part case 10 has a bottom wall 11, the front wall 12, the side walls 13 and 13 on either side, and the hind bridge wall 14. Steps 12a and 12b are formed in two steps at the front wall 12, and rib 12c is set up by the center section of low step 12b. Moreover, the hind bridge wall 14 is lower than the side walls 13 and 13 on either side and the front wall 12, and in order to install printed circuit board P, the steps 14a and 13a of the same height as the upper surface of step 12b are formed in the upper part of a bridge wall 14 and each side wall 13. Moreover, in case the upper limit of the hind bridge wall 14 is equipped with printed circuit board P, the projected parts 14b and 14b used as a guide protrude on it, and the medial surface of projected parts 14b and 14b is formed in the slant face.

[0019] In addition, printed circuit board P is the electronic parts P1 by the side of a front face, and P1. It shall contain in the main part case 10 so that -- may become the bottom and the pattern side by the side of a rear face may serve as the bottom, and they are the input terminal Pa of printed circuit board P, and Pa at this time. It shall project on step 12b through the slit formed in step 12b at the both sides of rib 12c. Moreover, the attachment feet 15 and 16 protrude on right and left, slit 15b for inserting the grounding metallic ornaments 17 other than round hole 15a for attachment in one attachment foot 15 is formed in the posterior part of the main part case 10 (drawing 1 , drawing 3), and long hole 16a for attachment which carries out opening towards an outside is formed in the attachment foot 16 of another side. However, slit 15b is used in order to be crooked and to equip with the tongue-shaped grounding metallic ornaments 17 which solder an end to printed circuit board P (drawing 3). Mounting hole 17a is formed in the other end of the grounding metallic ornaments 17 corresponding to round hole 15a, and the grounding metallic ornaments 17 are extended along the front face of the attachment foot 15.

[0020] In accordance with the superficies of a bridge wall 14, the fitting slots 11a, 13a, and 13a and the fitting ribs 11b, 13b, and 13b are formed in the back end circles side of a bottom wall 11 and the side walls 13 and 13 in parallel (drawing 1 , drawing 4). moreover, degassing of the diameter of very small which deep hollow 11c is formed in a part of bottom wall 11 (drawing 2), and hollow 11c does not illustrate -- the bottom wall 11 shall be penetrated through a hole

[0021] The transformer case 20 is the container object of front opening which contains the

pressure-up transformer T (drawing 1 , drawing 2). Upstream terminals Ta and Ta which become the pressure-up transformer T from an incurvation pin -- is attached and they are the upstream terminals Ta and Ta. -- is projected downward by the open section of the front face of the transformer case 20.

[0022] The transformer case 20 is really fabricated by insulating rigid-plastic material. The transformer case 20 has a bottom wall 21, the side walls 22 and 22 on either side, and an upper wall 23, and the posterior part is formed in the anomaly which suits the appearance of the pressure-up transformer T. Output terminals Tb and Tb of the pressure-up transformer T which protrusion formation of the tubed high-pressure output sections 24 and 24 is carried out, and becomes the posterior part both sides of the transformer case 20 from a straight-line pin. It projects inside the corresponding high-pressure output section 24, respectively. Then, the output lead wire which is not illustrated is output terminals Tb and Tb by putting in the high-pressure output sections 24 and 24. It is connectable.

[0023] The fitting slots 21a, 22a, and 22a and the fitting ribs 21b, 22b, and 22b are formed in the front end outside side of a bottom wall 21 and the side walls 22 and 22 on either side in parallel (drawing 1 , drawing 4). However, the fitting ribs 21b, 22b, and 22b shall suit the fitting slots 11a, 13a, and 13a by the side of the main part case 10, respectively, and the fitting slots 21a, 22a, and 22a shall suit the fitting ribs 11b, 13b, and 13b by the side of the main part case 10, respectively.

[0024] Then, by making the fitting ribs 22b and 22b correspond to the fitting slots 13a and 13a, and making the fitting slots 22a and 22a correspond to the fitting ribs 13b and 13b, to the main part case 10, the transformer case 20 can be connected with one, as slide fitting is carried out from the upper part (drawing 2 , drawing 4). In addition, at this time, in the culmination of connection, the fitting ribs 21b and 11b can fit into the fitting slots 11a and 21a, respectively, and can complete connection of the transformer case 20 and the main part case 10. Moreover, upstream terminals Ta and Ta of the pressure-up transformer T -- is the eyelets Pb and Pb for the output of printed circuit board P. A point is inserted in -- (drawing 1 , drawing 2), and they are Eyelet Pb and Pb. By [of --] soldering in a portion, the pressure-up transformer T is electrically connectable with printed circuit board P.

[0025] This main part case 10 and the transformer case 20 connect both, after completing each individually. That is, the main part case 10 attaches the grounding metallic ornaments 17 through slit 15b of one attachment foot 15, and solders the end to printed circuit board P while it contains printed circuit board P. On the other hand, the transformer case 20 turns the front open section up, after containing the pressure-up transformer T, it turns the hind high-pressure output sections 24 and 24 down, and it is filled up with a bulking agent EX until it becomes about one cup (drawing 2). In addition, the pressure-up transformer T is the bobbin T1 at this time. It can contain stably in the transformer case 20 by making it engage with the ribs 22c and 22c for positioning which form rib T1a in an end face, and form rib T1a in the inside of the side wall 22.

[0026] If the bulking agent EX within the transformer case 20 fully hardens, the transformer case 20 will be connected with the main part case 10, and they are the upstream terminals Ta and Ta of the pressure-up transformer T. -- The eyelet Pb of printed circuit board P, and Pb It solders to --. Thereby, since the electrical installation of printed circuit board P and the pressure-up transformer T can be completed, it continues and is filled up with a bulking agent UX in the main part case 10. this time -- the bottom wall 11 of the main part case 10 -- degassing -- since there is a hole, when the space of the lower part of printed circuit board P

can also be filled, a bulking agent UX can flow in the transformer case 20 exceeding the low bridge wall 14, and can also fill up the space between the front face of a bulking agent EX, and a bridgewall 14 with a part (drawing 2)

[0027] If a bulking agent UX hardens, it will consider as a finished product through a predetermined inspection process. In addition, this thing can take stable grounding by being able to fix to arbitrary attach points using the attachment feet 15 and 16, and ***** (ing) the grounding metallic ornaments 17 using the mounting screw by the side of the attachment foot 15 at this time. Moreover, the whole electric system is as drawing 5 .

[0028] In the above explanation, when output lead wire is good only on the one pole instead of two poles (drawing 6), the transformer case 20 should form only one high-pressure output section 24 of right-hand side or left-hand side in drawing 1 . In addition, the position of the high-pressure output section 24 at this time may be specified to be right-hand side or left-hand side. Then, since it corresponds to this option specification, the pressure-up transformer T and the transformer case 20 are combinable with the main part case 10, after fixing the related size with the main part case 10, preparing some kinds and choosing the pressure-up transformer T and the transformer case 20 according to option specification. That is, the transformer case 20 shall be combined free [exchange] to the main part case 10 according to option specification.

[0029] Moreover, the attachment feet 15 and 16 may make both the same configuration, and the grounding metallic ornaments 17 may enable attachment to both at this time.

[0030]

[Effect of the Invention] By combining a main part case and the transformer case connected with the rear of a main part case free [exchange] according to this invention, as explained above, much option specification Since the transformer case which contains a pressure-up transformer can be chosen, it can combine with a main part case and it can realize When it can respond easily to various option specifications, since both are another objects, a main part case and a transformer case have the outstanding effect that it can be dealt with easily individually.

[Translation done.]